

12 August 1964

MEMORANDUM FOR: Chief, Logistics Branch, Support Staff

ATTENTION : [redacted]

THROUGH : Chief, Development Branch, P&DS

SUBJECT : Modification of the [redacted] Enlarger's  
Film Transport

Enclosed are four copies of the Development Objectives for the  
Modification of the [redacted] Enlarger's Film Transport; two to  
forward to [redacted] for their use in preparing  
their proposal and two for your files. As in previous contractual  
matters, [redacted] should be approached on a [redacted] basis.

[redacted]  
Development Branch, P&DS

Enclosures four (4)

Distribution:

- Orig. and 1 - Forward to addressee
- 1 - Subj. File ✓
- 1 - Chrono

NPIC/P&DS/Dev. [redacted] 12 August 1964

Declass Review by  
NIMA/DOD

5 August 1964

## DEVELOPMENT OBJECTIVES

## 25X1A MODIFICATION OF THE [ ] ENLARGER'S FILM TRANSPORT

## 1. INTRODUCTION.

25X1A

The [ ] enlarger was designed to accommodate film formats up to 9" x 9" and has a maximum magnification power of 7x; however, at the highest magnification only the middle 6" of the film can be enlarged because of the size of the enlarging table. Any imagery outside of this 6" area is projected off the table and is not useable. If the table were to be made movable or larger, the edges of the lens field would be used; but at this magnification, it is more advantageous to utilize only the center portion of the field.

## 2. CONCEPT.

a. Purpose. This modification would enable the operator to obtain an enlargement of any portion of the film at the highest magnification while using the optimum portion of the lens field.

b. Scope. This modification will necessitate the redesign of the film transport head.

c. Philosophy. Since it is a paramount objective to obtain maximum resolution from the film, it would be best to be able to position any section of the film format over the center of the lens field: this would necessitate a complete redesign of the film transport head. Without a complete redesign, the operator would have not only to move the film forward from its present position, but also to remove and reverse the film spools -- for the purpose of enlarging the front edge of the film. The front edge is that edge closest to the operator as he faces the enlarger. This operation would be awkward and does not make use of the best part of the lens field, nevertheless, it would be better than our present situation with no edge enlarging capability at all.

## 3. REQUIREMENTS.

a. For any of the three proposed alternative modifications it is required that the film be maintained in the same plane it is presently in; parallel to the enlarging table and perpendicular to the lens axis, and that a locking device be utilized for maintaining a fixed position of the film during exposure. The following alternatives are listed in order of their desirability.

(1) Having the capability to position any portion of the 9" film above the center of the lens field without removing and reversing the film spools. This would require that the film be moved about  $\pm 4.5$  inches in the Y direction from its present position.

(2) Allowing the film to be moved in such a manner that its edge can be projected to the corresponding edge of the enlarging table: e.g., the front edge of the film can be moved back just enough so that it is projected to the back edge of the enlarging table and the back edge of the film can be moved forward to project it to the front of the table. This would necessitate moving the film approximately  $\pm 1.5$  inches from its present position.

(3) Simply moving the film forward about 1.5 inches and removing and reversing the film and film spools for the purpose of enlarging the front edge.

b. It is assumed that, in any of the above cases, when the film is moved, the complete film platen, spool assembly and transport will also have to be moved in the Y direction.

c. It would be most desirable to receive estimates on all three alternatives so that each alternative may be weighed with the cost involved so that the optimum solution may be achieved.

d. In any and all of the above alternatives the quality of the modifications must be such as not to destroy or degrade any of the capabilities or the resolving power of the original instrument. They must also maintain the same quality workmanship as is found on the original .

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JFM  
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PSD/NPIC-134-64  
2 December 1964

MEMORANDUM FOR: Assistant for Plans and Development

SUBJECT: Modification of [ ] Enlarger

REFERENCE: NPIC/P&DS-206-64 Dated 6 November 1964

We concur in the recommendations as stated in the referenced memorandum. However, we would like to hold up a few days until the new [ ] is installed. Logistics is in the process of getting the [ ] people in to accomplish the installation.

[ ]  
Chief, Production Services Division,  
NPIC

25X1A

NPIC/P&DS-206/64  
6 November 1964

MEMORANDUM FOR: Chief, Production Services Division, NPIC

SUBJECT : Modification of [ ] Enlarger

25X1A

REFERENCE : Development Objectives titled Modification of the  
[ ] Enlarger's Film Transport dated 5 August  
1964.

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1. The purpose of this memo is to obtain the concurrence of the Chief Production Services Division in the requirement for the modification of the [ ] Enlarger as indicated in the Development Objectives attached. From the discussion between [ ] it was determined that any other modifications to the enlarger such as a liquid film gate or lamp housing changes, would be far too extensive or expensive for this equipment. The quality of the output of this enlarger does not justify these additional modifications.

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2. It was also agreed that a vacuum easel is needed for this enlarger and it would be desirable if the operator could rotate the easel 45°.

3. It is realized that any modification to this enlarger must be done with a minimum down-time of the instrument.

4. The Plans and Development Staff would appreciate your formal concurrence on the above items.

25X1A

[ ]  
Assistant for Plans and Development

Attachments

CONFIDENTIAL